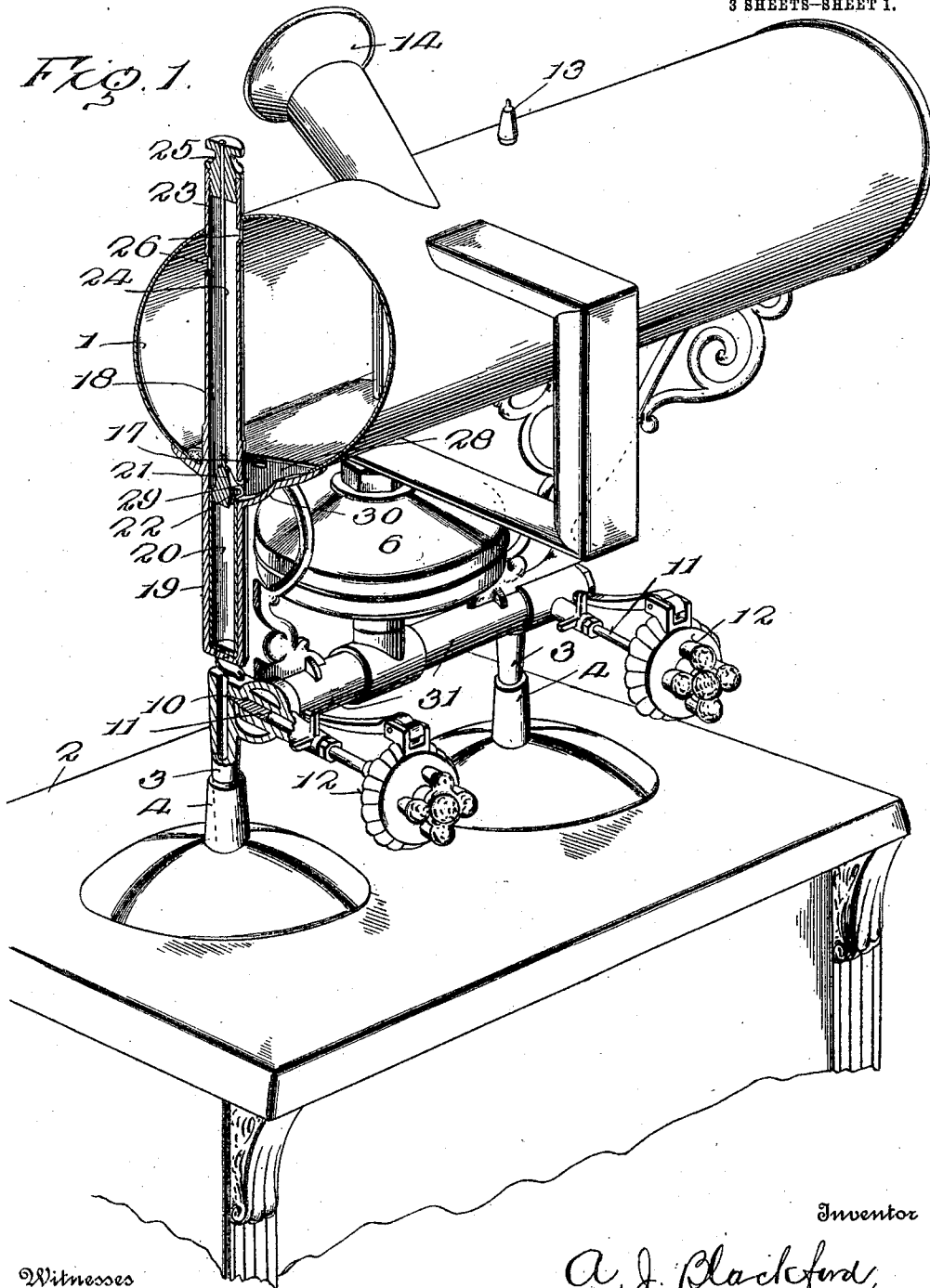


A. J. BLACKFORD.
GASOLENE STOVE.
APPLICATION FILED DEC. 2, 1909.

972,051.

Patented Oct. 4, 1910.

3 SHEETS—SHEET 1.



Witnesses

C. P. Wright for
L. L. Barker.

Inventor

A. J. Blackford.

By

A. S. Patterson

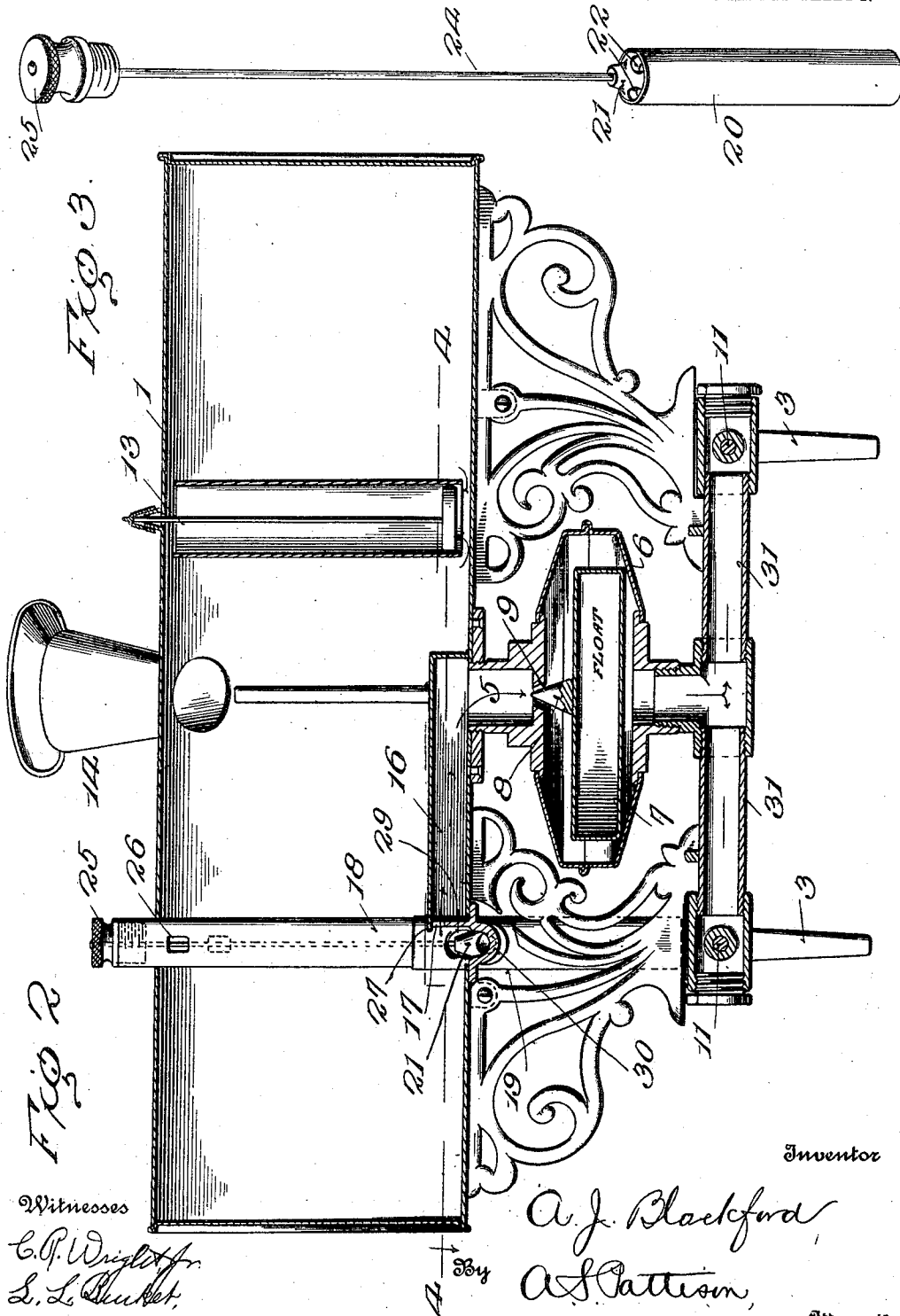
Attorney

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3 SHEETS—SHEET 2.

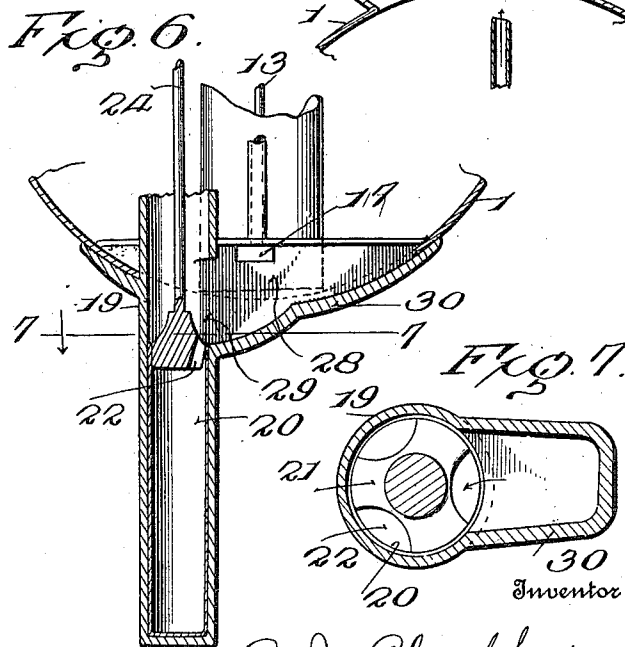
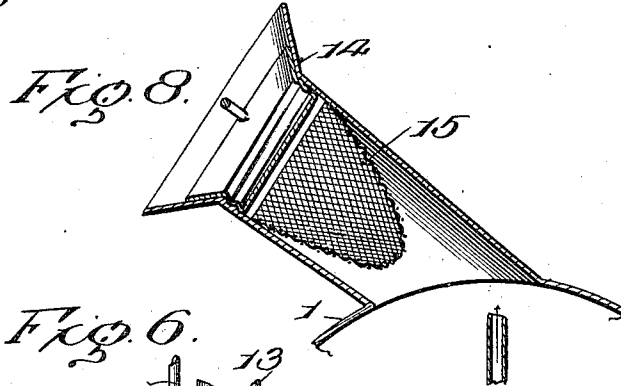
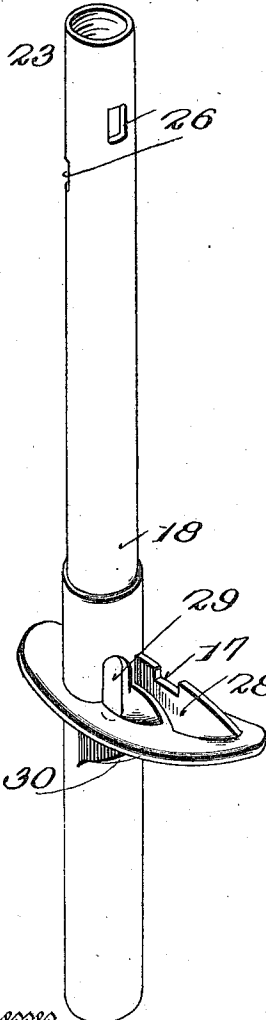
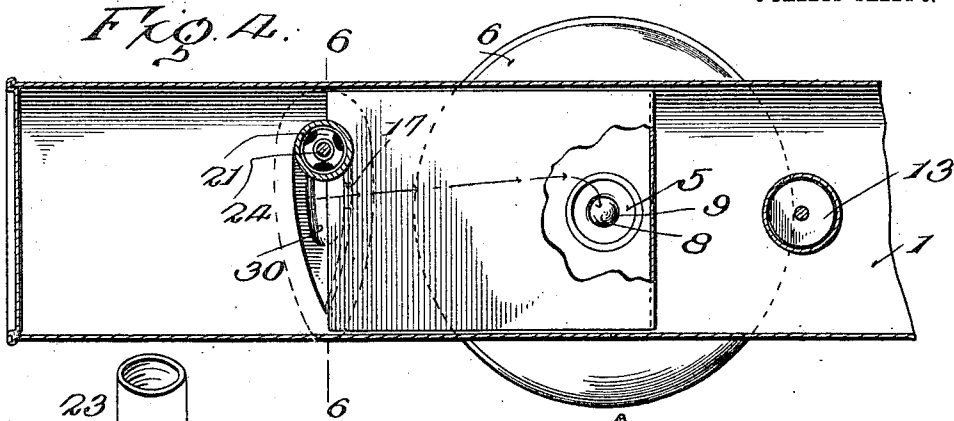


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3 SHEETS-SHEET 3.



Witnesses
C. P. W. *Fig. 5.*
S. L. Parker.

A. J. Blackford,
By A. Battism, Attorney.

UNITED STATES PATENT OFFICE.

ATWELL JAMES BLACKFORD, OF CLEVELAND, OHIO, ASSIGNOR TO AMERICAN STOVE COMPANY, OF ST. LOUIS, MISSOURI.

GASOLENE-STOVE.

972,051.

Specification of Letters Patent.

Patented Oct. 4, 1910.

Application filed December 2, 1909. Serial No. 531,015.

To all whom it may concern:

Be it known that I, ATWELL JAMES BLACKFORD, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Gasolene-Stoves, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in gasolene stoves, of that type shown and described in my United States Patent No. 739,144, of September 15th 1903, in which the gasolene is fed slowly and usually drop by drop to an evaporator from which the vapor or gas descends to the burner by reason of its specific gravity being greater than that of the atmosphere. In this type of stove the gasolene is fed very slowly to the evaporator and thence through a very small opening. In practice the gasolene in this type of burner is sometimes fed irregularly, which irregularity is emphasized by a very irregular flame at the burner. I have found that this irregularity is due to two causes, viz: the accumulation of water which is nearly always to some extent in gasolene, and also to an accumulation of dirt in the small gasolene exit passage. Owing to the smallness of this passage and to the fact that the passage is located in a plane below the gasolene supply, the water being of greater specific gravity than the gasolene gravitates to the small exit and will interfere with the regular flow of gasolene therethrough. Likewise any dirt will also find its way to the exit by reason of its specific gravity.

The object of my present invention is to provide means for preventing the water and dirt from passing to and through the gasolene feed-pipes to the said exit by intercepting them and causing them, by reason of their greater specific gravity to descend into a trap which is removable so that the accumulated water and dirt may from time to time be removed.

In the accompanying drawings: Figure 1 is a sectional perspective view of a gasolene supply tank and its feed passage which embody my present invention. Fig. 2 is a vertical central sectional view through the tank and feed-pipes showing my improvement applied thereto. Fig. 3 is an enlarged detached perspective view of the removable trap. Fig.

4 is a horizontal sectional view on the line 4—4 of Fig. 3 looking in the direction indicated by an arrow. Fig. 5 is a detached perspective view of the trap casing with its attached wall or dam. Fig. 6 is an enlarged transverse perspective view on the line 6—6 of Fig. 4. Fig. 7 is a horizontal sectional view on the line 7—7 of Fig. 6. Fig. 8 is a sectional view through the receiving nozzle and strainer of the supply tank.

It is well known to those skilled in this art that in the type of gasolene burner herein referred to the supply tank 1 is located at the top 2 of the stove, and that the final gasolene exit pipe or pipes 3 removably enter a receiving nozzle or nozzles 4, and that there is a pipe 3 and a nozzle 4 for each burner of the stove. Furthermore, in this type of stove, as heretofore used, the gasolene flows directly from the tank 1 through a passage 5 to a chamber 6, in which the gasolene is held at a maintained level through the medium of a float 7, and float valve 8 co-acting with a passage 9. The object of this construction is to have a uniform and maintained head of gasolene irrespective of the amount within the tank 1, whereby a uniform gravity pressure is maintained at the gasolene exit 10. This exit 10 is controlled by a needle-valve 11, having any desired form of handle 12 at its outer end for regulating the exit opening and thereby the rapidity of the dropping of the gasolene from this opening 10 into the exit passage 3. Also the tanks heretofore used have a suitable indicator float 13 and a receiving nozzle 14 in which is placed a strainer 15.

My present improvement embodies the idea of intercepting the flow of gasolene from direct communication to the passage 5, and to locate a trap below the opening through which the gasolene passes from the tank, into which trap the water and dirt will flow owing to their greater specific gravity, while the clean gasolene will pass through the opening thereabove.

This improvement may be embodied in various details of construction without departing from the spirit and scope of my invention, the construction herein shown and hereafter described being for the purpose of illustrating the principle of the improvement.

Referring now to the drawings and particularly to the present improvement, I suitably locate a passageway 16 through which the gasolene must pass before it flows to the
 5 valved or controlled exit 10. This passage has an inlet opening 17, and a trap casing 18 is preferably placed adjacent this opening 17. The casing 18 depends below the tank 1, as shown at 19, and within this
 10 depending casing 19 is a removable cylindrical trap 20. The top 21 of this removable trap has one or more inlet openings 22, and the top is located in a plane below the opening 17. For convenience and as a guide-way for
 15 the insertion of the removable trap 20 the casing 18 extends through the tank 1, and projects above the tank, as shown at 23. A rod 24 is connected to the top 21, of the trap and the opposite end of the rod is connected
 20 with a screw cap 25, which screws into the projected end 23. Formed in the upper portion of the casing 18 is one or more openings 26, which establish communication between the interior of the tank and the said casing
 25 18, the object of which will be referred to hereinafter.

Attention is directed to the fact that this opening 17 extends in a horizontal direction so that the falling dirt does not directly enter the opening and by reason of this construction the descending water does not
 30 have a tendency to enter this opening. Preferably the top wall of the passage 16, projects over this opening a slight distance as shown at 27, so that it is further protected
 35 against the passage therethrough of water and dirt. Furthermore, the opening 17, as here shown, is located above the bottom of the tank which forms a chamber 28, and this
 40 chamber communicates with the trap casing 19, through a passage 29. Preferably this chamber is partly located below the bottom of the tank and this downward extension is formed by a wall 30, which projects from
 45 the casing 19. By reason of this downward extension the upper end of the trap 20 may be placed considerably below the opening 17, whereas the opening 17 may be placed adjacent or substantially in a horizontal
 50 plane with the bottom of the tank, so that practically all the gasolene contained in the tank will flow through this opening.

In the operation of this improvement the gasolene flows from the tank through the
 55 opening 17 into the passage 16, and from thence through the chamber 6, into the passage 31, and from this passage through the gasolene exit or exits 10, while the water and dirt by reason of greater specific gravity
 60 fall into the chamber 28 and find their way into the removable trap 20, thus preventing them from passing to the exit 10 and avoiding irregularities in the flow of gasolene by reason of the presence of water, dirt or other
 65 interfering particles at said exit.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. The combination with a gasolene supply tank having a horizontally projecting gasolene exit passage therein above its bottom, of a combined water and dirt trap having its upper end located vertically under the inlet end of the horizontal exit passage. 70

2. The combination with a gasolene supply tank having a gasolene exit and a trap chamber below the exit, of a removable trap located within said chamber. 75

3. The combination with a gasolene supply tank for gasolene stoves, having a gasolene exit adjacent its bottom and a dirt and water chamber adjacent but below said exit, of a water and dirt receiving trap having its upper end communicating with the said dirt and water receiving chamber. 80

4. The combination with a gasolene supply tank having a gasolene exit, a trap chamber depending below the bottom of the tank, and a removable trap in said trap chamber having its upper end in communication with the tank below the said gasolene exit. 85

5. The combination with a gasolene supply tank for gasolene stoves having a gasolene exit adjacent its bottom and a depending trap casing communicating with the tank adjacent the said opening, of a removable water and dirt receiving trap within the said depending casing, the upper end of the trap communicating with the tank at a point in a horizontal plane below the gasolene exit. 90

6. The combination with a gasolene supply tank for gasolene stoves having a gasolene exit adjacent its bottom and a cylindrical casing passing through the tank with its end depending below the bottom of the tank and its upper end projecting above the tank, of a removable water and dirt receiving trap located within the depending portion of the casing the upper end of the trap communicating with the tank at a point in a horizontal plane below the gasolene opening, and a rod connected to the removable trap and extending through the upper portion of said casing and carrying an external handle by means of which the trap can be removed and emptied and replaced as required. 100

7. The combination with a gasolene supply tank for gasolene burners having a gasolene exit adjacent its bottom, of a removable trap having communication with the tank at a point in a horizontal plane below the said gasolene exit and means for removing and replacing said trap. 105

8. The combination with a gasolene supply tank having a gasolene exit passage, with an upright wall, said wall having a horizontal gasolene exit, of a removable trap 110 130

having communication with the tank at a point in a horizontal plane below and adjacent the said gasolene exit.

5 9. The combination with a gasolene supply tank for gasolene stoves, having a gasolene exit adjacent its bottom and a water and dirt receiving chamber below the said gasolene exit, of a trap having communication with the said chamber at a point in a

horizontal plane below the said gasolene 10 exit.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

ATWELL JAMES BLACKFORD.

Witnesses:

R. J. CAMPBELL,

H. M. FARNSWORTH.